

# **PROJECT NO. 2021-804**

On-Call Value Engineering and Constructability Review Consultants

PREPARED FOR:

DATE:

STATE OF WASHINGTON DEPARTMENT OF ENTERPRISE SERVICES

3 / 24/ 2021



VALUE ANALYSIS
CONSTRUCTABILITY
COMMISSIONING
FACILITY ASSESSMENT
PERFORMANCE ENGINEERING
COST ANALYSIS

State of Washington Department of Enterprise Services Attn: Paul Fiedler paul.fiedler@des.wa.gov

RE: Project No. 2021-804 On-Call Value Engineering and Constructability Review Consultants

Dear Members of the Selection Committee:

Recognizing that the last two years have been an incredibly difficult time for educational institutions, MENG Analysis commends DES staff and its community and technical college partners for navigating our recent shared challenges. We are ready to support DES as you continue the essential work helping modernize and create new teaching and learning facilities in our communities.

Known for value engineering (VE) and constructability review (CR) expertise in the Puget Sound region, MENG Analysis has been a partner to DES since 2014, starting with a VE project for a building at Renton Technical College. Since then, we have completed an additional 33 VE and CR projects and have built a robust understanding of DES's mission, needs, and values. We have also worked with DES on numerous commissioning projects, as well as specialty one-off projects, such as a peer review of the proposed capitol campus energy renewal and ESCO proposal.

Each of our VE studies are led by SAVE International-certified staff as required by WAC 392-344-065. We adhere to SAVE International's best practices and conform to the requirements outlined in WAC 392-343-080. Our constructability review projects also conform to WAC 392-344-066 and are completed by experienced industry experts. For both VE and CR projects, we select team members with applicable expertise to the project we are reviewing. We maintain relationships with numerous subject matter experts throughout the state and beyond who are trained in our methodology.

During the last year due to COVID-19, we have transitioned to 100% remote VE and CR workshops. We collaborate live through Zoom meetings and live team collaborative Bluebeam Studio sessions. Our clients love the efficiency that remote work has made possible. It also makes client participation and attendance at workshops simpler. We welcome any of our clients and design team members to attend our workshops and collaborate with our team.

We would love to answer any questions you may have and look forward to continuing our professional partnership with the Department of Enterprise Services.

Sincerely, MENG Analysis

Sarah Partap

Principal, Project Manager

www.menganalysis.com

2001 Western Ave Suite 200

Seattle, WA 98121

206.838.9797





## STATE OF WASHINGTON

## DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson St. SE, Olympia, WA 98501 PO Box 41476, Olympia, WA 98504-1476

## Designated Point of Contact for Statement of Qualifications

Designated 1 only of Contact for Statement of Quantifications						
Point of Contact Name and Title						
1 01110 01 001	Sarah Partap, MBA, VMA, Principal					
Firm Name	MENG Analysis					
Address	2001 Western Avenue, Suite 200					
City	Seattle	State WA	<b>Zip</b> 98121-3300			
Telephone	206-838-9797 (office) 206-451-3462 (cell)	Email sarah@menganalys	sis.com			

## Addresses of multiple office locations of firm (if applicable)

	, <b>11</b>
Address N/A	
City	Phone
Address	
City	Phone
Address	
City	Phone
Address	
City	Phone

# Diverse Business Certifications (if applicable)

= 1, e12 = (1, e17)
Certification issued by the Washington State Office of Minority and Women's Business Enterprise (OMWBE)  ☐ Minority Business Enterprise (MBE)
□ Woman Business Enterprise (WBE)
☐ Minority Women Business Enterprise (MWBE)
Certification issued through the Washington State Department of Veteran's Affairs
☐ Veteran Owned Business

# SF 330 PART II

## PART II – GENERAL QUALIFICATIONS

(It	f a firm has branch offi		mplete fo	_			seekin	g work.	)
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EGM, Inc. dba MENG Analysis						1976	963404876		
2b. STREET	-					5	. OWNER	SHIP	
2001 Wes	tern Ave, Suite 200			a. TYPE S-Corp					
2c. CITY			2d. STATE	2e. Z	IP CODE				
Seattle			WA	9812	21	b. SMALL BUSIN	IESS STAT	US	
Sedille WA						YES			
	OF CONTACT NAME AND TITLE					7 NAME OF FID	M crc i i	2 : /	/ cc )
	rtap, Principal IONE NUMBER	6c F-M/	AIL ADDRESS		7. NAME OF FIRM (If block 2a is a branch				ich office)
			menganal	usia o o ma		N/A			
206-838-9		sarane	menganar						AU IMPED
	R FIRM NAME(S) (If any)				8b. YEAR ESTABLISHED				
Meng Ass	sociates				1976 099038			945	
	9. EMPLOYEES BY DISCII	PLINE		10		OF FIRM'S EXPERIENCE AND ANNUAL SE REVENUE FOR LAST 5 YEARS			
a. Function	b. Discipline	c. No. of	c. No. of Employees			b. Experience			c.
Code	·	(1) FIRM	(2) BRANCH	Code		·			Revenu e Index Number
61	Value Engineers	2		V01	Value Ai	nalysis			5
42	Mechanical Engineer (CCP)*	1		E02	·			4	
58	Technician (1 CCP)	2		A12	Automa	tion; Controls; I	nstrumei	ntation	3
18	Cost Estimator	1		C05	Child Co	nild Care/Development Facilities			1
48	Project Manager	1		C11		Community Facilities			1
					C15 Construction Management				1
				C18					1
				E05 Elevators, Escalators, People Movers			overs	1	
				F02	,				1
				F03 G01					1
				G01 Garages Vehicle Maintenance Facilities					'
				H04	_	Ventilating, Air Conditioning			3
				H09	Hospital & Medical Facilities			<u> </u>	1
				H11	Housing				1
*Mechanical engineer is also a				001		ice Buildings 2			
	value engineer	P13				ic Safety Facilities 2			2
	TOTAL	6		LO1	Laborato	ories			1
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUE OF FIRM					AL SERVICES	REVENUE INDEX			
(Incort vo	FOR LAST 3 YEARS		ess than \$100, 100,000 to less		000	6. \$2 million f			
a. Federal V	venue index number shown at right)  Vork 1		250,000 to less			8. \$10 million			
	b. Non-Federal Work 6 4. \$500,000 to less than \$1 million 9. \$25 million to less than \$50 million								
c. Total Work 6 5. \$1 million to less than \$2 million 10. \$50 million or greater									
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.									
a. SIGNATURE							b. DATE		
and many							21, 2021		
c. NAME AN	ID TITLE								
Sarah Pa	rtap, Principal			Page 27					

# **CORPORATE OVERVIEW**

## **About MENG Analysis**

MENG Analysis is a Pacific Northwest-based quality and cost performance firm that performs analysis of data and design to enhance project value for our clients. We assemble specialized teams to meet the specific needs of the client and each project. Our teams provide local knowledge and an understanding of the conditions specific to the region.

The majority of our work is in service to K-12 and higher education, public agencies, and municipalities, so we understand the importance of making the most efficient use of public funds. Our work helps maximize the life of each facility, while considering safety and identifying opportunities that can save money in maintenance and operations costs.

## **Value Engineering**

Our expertise includes performing formal VE of capital projects at all levels of design. Having tailored more than 750 studies for public and private clients using all project delivery methods, our experience has led to such innovations as multi-phased studies, risk management, and

integrated design standard components of our analyses.

## **Constructability Review**

Our facilitated workshop approach emphasizes interdisciplinary techniques for pre-bid coordinated review of contract documents. MENG Analysis offers an individualized system for constructability reviews, which includes discipline checklists, team workshops, senior-level expert involvement, phasing review, and a focus on real field coordination issues. We understand the Northwest region construction market and its key players. We analyze documents from the contractor perspective to help our clients maximize the clarity of their construction documents. This helps our clients avoid the additional costs and delays associated with requests for information and change orders during construction. We use Bluebeam for all document markups, making it easy for the design team to incorporate updates.

## **Work Order Management**

Sarah Partap is the team's overall work order manager and primary point of contact. She has experience managing



previous VE/CR contracts with the State of Washington and other public agencies.

Sarah is responsible for establishing the statement of work, budget, schedule, and team for each task order. During the actual workshops, Sarah ensures each project schedule and budget is adhered to. During project closeout, she is responsible for reviewing the performance of each project, approving consultant invoices, and invoicing DES.

## **Subconsultant Management**

MENG Analysis selects architecture, engineering, and construction professionals and other specialized experts for our teams to meet the precise project and schedule requirements of our clients. With four to seven subconsultants for each project and about 60 projects each year, this requires effective management of well over 300 individual subconsultants and agreements annually.

## **Concurrently Managing Multiple Studies**

With a combination of in-house and consultant specialists, we can lead up to three concurrent workshops, if client schedules require it.

MENG Analysis will act as the prime contractor assigning appropriate members to VE and CR teams based on a project's specific needs as well as staff availability. As a small firm, we are able to respond and mobilize quickly to address all project requests promptly and in the most expeditious manner possible.

"MENG was great to work with in that they brought together all the necessary parties and considered multiple options for cost savings. They seemed to take an outside the box approach to brainstorming which allowed them to present us with multiple options and considerations on our project."

# Ariel Birtley, Chief Facilities Officer Olympic College

Project: Olympic College Building 14 Renovation VE

## **On-Call Contracts for Independent Review**

MENG Analysis has extensive experience working with oncall contracts on a task-order basis. Recent on-call work includes:

- State of Washington Department of Enterprise Services VE and CR On-Call
- Seattle Public Utilities VE On-Call
- City of Calgary Value Management On-Call
- Indian Health Services VE On-Call
- Alberta Infrastructure Value Assurance On-Call
- Sound Transit Independent Technical Review
- Washington State Department of Transportation Statewide VE projects
- New York City Office of Management and Budget On-Call Task Order Contract for VF Studies

## **KEY PERSONNEL**

#### **Our Team**

Our proposed team is structured to enable the use of multiple concurrent VE and CR teams at any given time, should the need arise. This structure allows us the flexibility to accelerate schedules and meet the needs of DES as required. In addition to our core team, we have listed specialty consultants with whom we have working relationships that will be ready for teaming opportunities on our studies.



## PROJECT / WORK ORDER MANAGER

Sarah Partap, VMA Principal, MENG Analysis

## VALUE ENGINEERING/CONSTRUCTABILITY REVIEW TEAM

## **VE/CR STUDY FACILITATORS**

Timothy Buckley, AIA, VMA, LEED AP Principal, MENG Analysis Doug Smith, PE, VMA, CCP, LEED AP, CSBA Principal, MENG Analysis

Matt Lersch, CCM, BECxP, CxA + BE CR Facilitator, MENG Analysis

## **SUBJECT MATTER EXPERTS**

# EDUCATIONAL/ INSTITUTIONAL FACILITIES

Timothy Buckley, AIA, LEED AP Johnny Hong, AIA Dennis Erwood, AIA, LEED AP

## **HEALTHCARE FACILITIES**

Bruce Davidson, AIA William Parker, AIA

#### **CIVIL ENGINEERS**

Nina Cousins, PE Mark Van Wormer, PE Doreen Gavin, PE, LEED AP

## **MECHANICAL ENGINEERS**

Doug Smith, PE, VMA, CCP, LEED AP, CSBA
Tamás Bencsik, PE
Lee Bogard, PE

#### **ELECTRICAL ENGINEERS**

Matt Woo, PE, RCDD, LEED AP Bill Diephuis, PE Doug Bors, PE

#### **SUSTAINABILITY**

Doug Smith, PE, VMA, CCP, LEED AP, CSBA Lauri Strauss, AIA, LEED AP BD+C Timothy Buckley, AIA, LEED AP

## **BUILDING ENVELOPE**

Nathan Seney, RA Juan Aguirre, PE Matt Lersch, CCM, BECxP, CxA + BE

## STRUCTURAL ENGINEERS

Craig Stauffer, PE, SE Sandro Kodama, PE, SE Dick Hemmen, PE, SE

## **CONSTRUCTION & COST MANAGER**

Brad Sayre, AVS David Rea Adam Wirthlin, PE Andy Cluness

## **RESUMES**



Sarah Partap,

Project Manager
Principal | Director of Operations
sarah@menganalysis.com

Sarah has a decade of project management and support experience in the engineering consulting industry. Her MBA studies focused on leadership and team building strategies, which she uses to keep the MENG Analysis team on schedule and within budget. Sarah is the project manager for all DES projects and is in charge of schedule, scope, team member selection, overall quality control, and invoicing.

#### **Education:**

Master of Business Administration, Seattle University; Leadership Certification, Seattle University; Bachelor of Arts, Honors History and French, University of Washington

## **Registration:**

Value Management Associate, SAVE International

## **Relevant Project Experience:**

DES North Seattle College Library Renovation VE DES North Seattle College Library Renovation CR

DES Olympic College Building 14 Renovations VE

DES South Seattle College Fitness Center CR

DES Pierce College at Ft. Steilacoom Cascade Building CR

Grays Harbor College Student Services Instructional Building Value Engineering and Constructability Review; Aberdeen, WA

Edmonds Community College Science, Engineering and Technology Building Constructability Review; Edmonds, WA Central Washington University Health Sciences Building Value Engineering; Ellensburg, WA

Big Bend Community College Professional Technical Education Center Value Engineering; Moses Lake, WA Highline College Health & Life Sciences Building Value Engineering; Des Moines, WA

South Seattle College Wellness Center Value Engineering and Constructability Review; Seattle, WA

"Sarah was a pleasure to work with. She did a great job keeping the project team on task while meeting our demanding scope and schedule. Sarah is a great communicator and managed the project to a very high standard."

Ron Major, CEM, Resource Conservation Program Manager, Washington DES



# Timothy Buckley,

AIA, VMA, LEED AP

**VE and CR Facilitator**Principal | Director of Value Services timothy@menganalysis.com

As a design architect, Timothy's projects often went through the Value Engineering & Constructability Review process. From being on the receiving end of these services, he came to really appreciate the value they brought to his projects. He works hard on each VE & CR to pass that same value on to our client and design teams. Timothy is known for his strong leadership skills, participation in CPARB-PRC, and volunteer work supporting the Society of American Value Engineers (SAVE) International.

#### **Education:**

Bachelor of Architecture, Washington State University; Bachelor of Science, Architectural Studies, Washington State University

## **Registration:**

Architect - Washington and Oregon; NCARB Certified; LEED Accredited Professional; Value Management Associate, SAVE International

## **Relevant Project Experience:**

DES North Seattle College Library Renovation VE

DES North Seattle College Library Renovation CR

DES Olympic College Building 14 Renovations VE

DES South Seattle College Fitness Center CR

DES Pierce College at Ft. Steilacoom Cascade Building CR Highline College Health & Life Sciences Building Value Engineering; Des Moines, WA

Big Bend Community College Professional Technical Education Center Value Engineering; Moses Lake, WA

Tacoma Community College Health and Wellness Center Value Engineering; Tacoma, WA

Tacoma Community College Health and Wellness Center Constructability Review; Tacoma, WA

Centralia College New Science-Technology Building Value Engineering; Centralia, WA

Central Kitsap School District Central Kitsap High School - Middle School Value Engineering; Silverdale, WA

Vancouver Public Schools Truman Elementary School Value Engineering and Constructability Review; Vancouver, WA



**Doug Smith,**PE, VMA, CCP, LEED AP, CSBA

VE and CR Facilitator
Principal | Director of Engineering
doug@menganalysis.com

Doug is a registered mechanical engineer with over 30 years of experience and a passion for sustainability. Doug is detailed, pragmatic, and extremely knowledgeable in maintenance best practices. He frequently presents at industry events energy conservation, sustainability, and health and wellness in the built environment, including at the 2019 Energy & Facilities Connections Conference, talking about health impacts of the built environment. Doug is a VMA-certified VE facilitator and either facilitates or acts as the mechanical reviewer on all MENG Analysis VE & CR project.

#### **Education:**

Bachelor of Science, General Engineering, US Naval Academy; Master of Business Administration, Technology Management, City University

## **Registration:**

Professional Engineer - Washington; Value Management Associate, SAVE International; Certified Commissioning Professional; LEED Accredited Professional; Certified Sustainable Building Advisor

## **Relevant Project Experience:**

DES North Seattle College Library Renovation VE DES North Seattle College Library Renovation CR DES Olympic College Building 14 Renovations VE

DES South Seattle College Fitness Center CR

DES Pierce College at Ft. Steilacoom Cascade Building CR Highline College Health & Life Sciences Building Value Engineering; Des Moines, WA

South Seattle College Integrated Education Building Value Engineering; Seattle, WA

Big Bend Community College Professional Technical Education Center Value Engineering; Moses Lake, WA Edmonds Community College Science, Engineering and Technology Building Constructability Review; Edmonds, WA Centralia College New College Commons Value Engineering; Centralia, WA

Centralia College New Student Center Constructability Review; Centralia, WA

Tacoma Community College Health and Wellness Center Value Engineering; Tacoma, WA

Tacoma Community College Health and Wellness Center Constructability Review; Tacoma, WA

Whatcom Community College Learning Commons Value Engineering; Bellingham, WA



Matt Lersch, CCA, BECXP, CXA + BE

CR Facilitator
Construction and Cost Manager
matt@menganalysis.com

Matt Lersch has over 20 years of experience in the construction industry over a variety of construction types and roles. He has been involved in large scale estimating, project management, owner representation, litigation support, construction defect investigation, and working with infrared technology. He is a Certified Construction Auditor and holds his level II certification in infrared technology. Matt also leverages his building science knowledge in review envelope systems and is a certified envelope commissioning provider. Matt's role includes reviewing contract specifications, cost estimates, staging and phasing plans, and general real-world constructability issues on VE & CR projects.

## **Education:**

Master of Science, Forensic Accounting, Florida Atlantic University; Bachelor of Science, Finance, University of Phoenix

## **Registration:**

Certified Construction Auditor; Level II Infrared Technician (ITC); Building Enclosure Commissioning Process Provider and Commissioning Authority+Building Enclosure Knowledge

## **Relevant Project Experience:**

DES North Seattle College Library Renovation VE DES North Seattle College Library Renovation CR DES Olympic College Building 14 Renovations VE

DES South Seattle College Fitness Center CR

DES Pierce College at Ft. Steilacoom Cascade Building CR Bellevue School District Puesta Del Sol Elementary School Constructability Review; Bellevue, WA

Puyallup School District Pope Elementary School Value Engineering; Puyallup, WA

Clover Park School District Clover Park Middle School Constructability Review; Lakewood, WA

Bellevue School District Highland Middle School Constructability Review; Bellevue, WA

Kennewick School District Kennewick High School Value Engineering and Constructability Review; Kennewick, WA

Clover Park School District New Middle School

Constructability Review; Lakewood, WA

Stanwood Camano School District Stanwood High School Constructability Review; Stanwood, WA

## VALUE ENGINEERING APPROACH

MENG Analysis delivers value engineering (VE) services which improve the function, value, and quality of a project. We seek to increase project value by minimizing costs and use of resources while maximizing functionality and durability.

## **Collaboration**

The MENG Analysis team approaches studies from a collaborative and respectful standpoint. We emphasize the benefits of consensus team building, rather than pursuing "critical reviews". Prior to the kickoff meeting, we ask our team to review the project documents and craft a Key Issues Memo (KIM) with meaningful questions and requests for additional information. Coming to the kickoff meeting with some familiarity with the project builds trust and helps to facilitate buy-in of the client-design team.

# CONTROL OF THE POINTS AND CONTROL OF THE POINTS

## **Attention to Stakeholder Criteria**

Truly appreciating that each project and each client is unique requires one to listen; we take exceptional measures to listen to our clients and their project teams before we begin each study. Having a solid understanding of criteria and utilizing our criteria prioritization exercise during the kick-off meeting enables us to filter our proposed alternatives to be most responsive to the particular issues on each project.

## **Timing of Workshops**

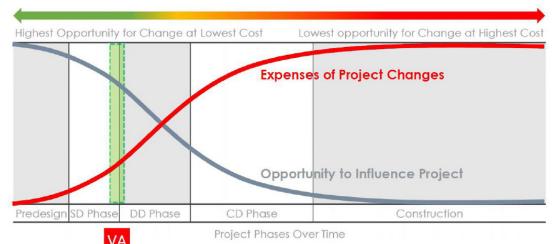
The timing of our VE studies depends on several factors. For complex projects with significant program or site/civil issues, we prefer to facilitate a focused workshop on these elements early in the design process (i.e., during early concept or schematic design). We suggest scheduling the VE following your selection of major building systems, but prior to the development of the preferred alternatives.



When composing VE proposals, a simple equation should always be at the forefront of every idea

Value = Function ÷ Resources

## **Value Engineering Timing/Opportunity**



## 6-Phase Value Methodology

#### 1. Information

Review design, listen to design team, and ask questions.

# 2. Function Analysis

Identify design functions and create FAST\* diagram.

## 3. Creative

Brainstorm any and all creative proposal ideasno bad ideas in this phase.

## 4. Analysis

Select the top creative ideas that align with prioritized criteria and maximize project value.

## 5. Development

Flesh out selected proposals with write up, sketch, and cost estimate.

# 6. Report & Implementation

Present findings to the owner and design team. Owner and design team completes implementation form.

\*FAST stands for Function Analysis System Technique and is an exercise specific to the formal Value Engineering Process.

## **6-Phase Value Methodology**

## 1) Information Phase

An important pre-study activity involves the review of the project cost estimate at the onset of the Information Phase. For each project, we build upon the design team's estimate to complete a cost model showing the cost per component. Such cost models are an extremely useful method of highlighting the allocation of cost components in any given project.

Our VE workshops begin with a kick-off/presentation allows the VE team to understand and define the study goals, criteria, scope, and constraints. The orientation meeting also enables the team to request specific information and clarification on project details. Planners, Project Managers and Designers often have different criteria for decision-making and selection of alternatives.

## 2) Function Analysis Phase

Function Analysis is the fundamental principle that distinguishes VE from traditional cost-cutting exercises. It is a process that identifies the intent and associated value of the project's functions. A tool we often employ involves the generation of function analysis diagrams arranging functions with higher order functions (how) to the left of the diagram and supporting functions (why) to the right of the diagram. Function Analysis Systems Technique (FAST) allows not only the facilitator, but the entire VE team to identify the basic critical path functions and essential project functions (e.g., separate facility structural support functions, maintenance functions, and those functions necessary for continued operation during construction.)

## 3) Creative Phase

Our VE facilitators are skilled in the use of a variety of techniques to solicit the broadest range of ideas from the VE team. We encourage cross-discipline idea creation (e.g., structural ideas from the civil engineer). Ideas will be combined, recombined, and expanded to generate as many ideas as possible. Our studies produce alternative proposals that are not only creative, but also VE proposals that work.

## 4) Analysis Phase

Our teams use the prioritized criteria to filter and select VE alternatives for further development. Team members conduct in-depth architectural/engineering analysis for the prioritized proposals. This enables each VE team member to report on each alternative and then the VE team as a whole makes a decision to:

- Advance it for further VE work
- Develop specific proposals
- Provide cost estimate adjustments or comments

Prior to developing these proposals, we contact the owner/design team representatives to discuss any alternative concepts that may result in major impact to design and request additional clarification of unresolved design questions. This serves as a "reality check" by helping the VE team avoid any flawed assumptions.

## 5) Development Phase

At this stage we complete cost estimates, life-cycle costs, and develop conceptual sketches. We also perform risk analysis, and review manufacturer recommendations and conduct ode review. We then contact vendors, suppliers, and specialists to verify information.

## 6) Report and Implementation Phase

We typically present both oral and draft written reports on the final day of the study. This immediate response reduces delays to the schedules of the project design team and project management. To help facilitate the efficiency of our VE studies, we have developed specialized forms and procedures:

- Careful, legible documentation of analysis, estimating and ideas produced (and recorded)
- Specialized, easy-to-use and easy-to-read forms
- Clear, computerized graphics
- Concise summaries
- Electronic reports (PDF)

## **CONSTRUCTABILITY REVIEW APPROACH**

Constructability Review (CR) is most effective with the review of bid-ready documents to simulate the project perspective taken by contractors. It is our job to reduce contractors' guesswork and risk to save time and money on your projects.

## **MENG Analysis CRs include:**

- Statistically derived checklists for all disciplines
- Strong interdisciplinary emphasis
- Coordinated, concurrent team review
- Fast turn around, with full documentation
- Senior-level team members
- A focus on real, in-the-field issues

Using our checklist and collaborative workshop technique, we offer a better system for completing CRs. Our team approach is rooted in the methodologies of quality assurance and in the interdisciplinary brainstorming and functional analysis techniques of value management. The CR team will review drawings and specifications for their potential difficulty or ease of construction, coordination between engineering disciplines, completeness and adequacy of information, and bidding clarity. In the past, we have determined that issues range from details and/or drawings not to scale, the inclusion of specifications from unrelated projects, to ductwork that conflicts with structural columns.

During the CR, we look for:

- Consistency of scale
- Completeness of drawings
- Attention to detail

## **Ease of Document Understanding**

By using an independent team, our document review ensures a completely unbiased review, providing valuable insight as to how the bid documents will be interpreted by contractors and assuring you that your project managers are spending time at what they do best—managing the project rather than processing avoidable requests for information (RFIs) and change order paperwork.

## **Constructability Review Process**

## 1) Design Document Checklist

Our proprietary checklist allows each A/E discipline team member to methodically check their drawings. We developed our checklist after identifying which document discrepancies are the most common and have the greatest cost impact during bid and construction. This statistical analysis was based not only on change orders for a variety of building types, but also on research to determine which problems cost the most time and thus money to the A/E team, owner, and contractor. We have determined that a significant percentage of construction problems are interdisciplinary, accounting for more than 70% of the dollar costs of changes.

## 2) Interdisciplinary Approach

All team members for each major trade and specialty work together in our office (now virtual office due to the COVID-19 pandemic) during the document review workshops. The very simple but highly effective technique of group review, including overlaying plans in Bluebeam, means problems and solutions are identified and resolved more quickly and effectively than if team members work independently. This approach distinguishes our services from the competition and results in more thorough reviews and higher return on investment for our clients.

### **Final Product**

At the end of the CR, MENG Analysis will provide:

- An electronically marked-up set of drawings and specifications.
- A written report with a description of discrepancies and key issues for follow-up.
- Oral presentation of our findings.
- Electronic CR report.

MENG Analysis can be contracted to perform CR back-check, if desired, to confirm that the final bid set addressed all the noted issues

# **RECENT PROJECTS**

Value Engineering & Constructability Projects for DES (2016-2021)  Project Owner, Name, and Location	SF	Value Engineering	Constructability	Year Completed	Contact, Email, Phone
DES, North Seattle College Library Renovation	54,359			2019	Gary Wendleken, gary.wendleken@des.wa.gov,
Seattle, WA	,,,,,,,				360.407.8709
<b>DES, Olympic College Building 14 Renovations</b> <i>Bremerton, WA</i> *VE complete; CR to be performed later this year	15,730	•	*	2021	Yelena Semenova, yelena.semenova@des.wa.gov, 360.407.9338
<b>DES Pierce College at Ft. Steilacoom Cascade Building</b> <i>Steilacoom, WA</i>	6,0378	•	•	2019	Christopher Gizzi, christopher.gizzi@des.wa.gov, 360.407.9304
DES, South Puget Sound Community College Health and Wellness Center Aberdeen, WA	40,000	•		2018	Stacy Simpson, stacy.simpson@des.wa.gov, 360.407.9340
<b>DES, Highline College Health and Life Sciences Building</b> <i>Des Moines, WA</i>	47,404	•		2016- 2017	Julie Nakahara, julie.nakahara@des.wa.gov, 360.239.7706
<b>DES, Big Bend Community College Professional Technical Education Center</b> <i>Moses Lake, WA</i>	118,991	•		2016- 2017	David Hickman, david.hickman@des.wa.gov, 360.407.7950
DES, Edmonds Community College Science, Engineering, and Technology Building Edmonds, WA	70,763	•		2016	Lee Knawa, lee.knawa@des.wa.gov, 360.239.0672
<b>DES, South Seattle College Wellness Center</b> Seattle, WA	15,520	•		2016	Jonathan Martin, jonathan.martin@des.wa.gov, 360.239.3350
Additional Value Engineering & Constructability Projects		Value Engineering	Constructability	Year Completed	
Project Owner, Name, and Location	SF	>	ŭ	క ర	Contact, Email, Phone
City of Shoreline, 145th Corridor Improvements Shoreline, WA	N/A	•		2021	Nytasha Walters, nwalters@shorelinewa.gov, 206.801.2481
City of Issaquah, Newport Way NW Improvements  Issaquah, WA	N/A	•		2019	Sheldon Lynne, sheldonl@issaquahwa.gov, 425.837.3426
<b>Puyallup School District, Ferrucci Junior High</b> <i>Puyallup, WA</i>	58,192	•	•	2020	Les Gerstmann, gerstLF@puyallup.k12.wa.us, 253.435.6673 Larry Vandeberg, VandeLJ@puyallup.k12.wa.us,
					253.435.6612
<b>Bellingham School District, Sunnyland Elementary School</b> <i>Bellingham, WA</i>	63,573	•		2020- 2021	Corey Ayers, corey.ayers@bellinghamschools.org, 360.319.5877
Deanighain, vvi					Curtis Lawyer, Curtis.lawyer@bellinghamschools.org, 360.676.6400

Additional Value Engineering & Constructability Projects (continued)  Project Owner, Name, and Location	SF	Value Engineering	Constructability	Year Completed	Contact, Email, Phone
Seattle Public Schools, Van Asselt Elementary School Seattle, WA	111.562	•	•	2020	Brian Fabella, brfabella@seattleschools.org, 206.252.0702  Eric Becker, pebecker@seattleschools.org, 206.252.0697
Kitsap Transit, Silverdale Transit Center Silverdale, WA	N/A	•		2020	Steffani Lillie, SteffaniL@Kitsaptransit.com, 360.478.6931
Seattle Public Schools, Kimball Elementary School Seattle, WA	108,185	•	•	2020	Paul Wight, pdwight@seattleschools.org, 206.252.0648
Mount Adams School District, Mount Adams K-8 School White Swan, WA	99,324		•	2019	Curt Guaglianone, cguaglianone@masd209.org, 509.874.2611
Grays Harbor College Student Services Instructional Building Aberdeen, WA	70,185			2018	Stacy Simpson, stacy.simpson@des.wa.gov, 360.407.9340
Central Washington University Health Sciences Building Ellensburg, WA	81,885	•		2016	Doug Ryder, douglas.ryder@cwu.edu, 509.963.1893
<b>Bellingham School District, Options High School</b> <i>Bellingham, WA</i>	55,099		•	2016	Curtis Lawyer, curtis.lawyer@bellinghamschools.org, 360.676.2691

## Van Asselt School Addition VE; Seattle, WA

## December 2020

This project is to be developed as an interim site to house a number of future Seattle Public School middle and elementary school students as capital levy projects redevelop their existing schools over the coming years. The facility is a 1950s era elementary school and a small four-classroom landmark school building. The project includes

- Site improvements, including utility systems, driveway and parking areas, plaza and play surfaces
- A substantial addition and renovation to the 1909 historic landmark school building
- Improvements to the 1950s school which will remain occupied throughout construction.

The VE team presented 11 proposed alternatives with a potential saving of \$2.6M. Additional scope refinement ideas totalled \$3.9M in savings.



"SOJ's [Shiels | Obletz | Johnson] project management team has many years of experience delivering complex projects and representing school districts. On our most recent school project, MENG Analysis performed the Value Engineering Study. This was a challenging project with a high degree of complexity and a shortened timeframe for the study. MENG's team was very responsive to our schedule and to the specific parameters of the study. We were very impressed by the collaborative approach working with the project team, the sensitivity of the team's VE proposals, and the level of professional quality of the team's deliverables."

Ethan Bernau, Project Manager, Shiels | Obletz | Johnsen

## **AVAILABILITY AND CAPACITY**

MENG Analysis has extensive experience managing multiple projects simultaneously. Flexibility and responsiveness are key factors in successfully leading value studies. Our forte is assembling expert teams of the highest level of technical expertise with short notice. This provides tremendous flexibility for us to fit your schedule.

With a combination of in-house and consultant specialists, we can easily lead three concurrent workshops with our inhouse VE and CR facilitators. We have developed systems to enable the fast turnaround in scheduling and assembling of expert teams.

"The Kennewick School District has a long history of successful capital projects. Much of that success has been accomplished with the help of MENG Analysis... Each project is unique and MENG has been quick to tailor their services to fit our individual projects. I really appreciate their flexibility in customizing services and meeting our timelines."

Douglas M. Carl, Director of Capital Projects, Kennewick School District

## **REFERENCES**

## Sumner-Bonney Lake School District

Marina Tanay, Project Manager 19701 104th St E, Bonney Lake, WA 98390 253.891.6300 Marina Tanay@sumnersd.org

## **Recent Projects:**

- Sumner High School
- Elementary School at Tehaleh
- Emerald Hills Elementary School Replacement
- Maple Lawn Elementary School
- Bonney Lake Elementary School
- Victor Falls Elementary School

## **Puyallup School District**

Les Gerstmann, Assistant Director of Construction Management 302 2nd St SE Puyallup, WA 98372 253.435.6673 GerstLF@puyllup.k12.wa.us

## **Recent Projects:**

- Pope Elementary School
- New Southwest Elementary School
- Firgrove Elementary School Replacement

## **Evergreen Public Schools**

Dan Bodell, Project Manager 14204 NE Salmon Creek Ave Vancouver, WA 98686 360.909.3210 Dan@randcmanagement.com

## Recent Projects:

- Sifton Elementary School
- Image Elementary School